CLAIMS

The embodiments of the invention in which an exclusive property or privilege is claimed are defined as follows:

1. An isolated nucleic acid encoding an *M. kandleri* protein as set forth in Schedule B.

2. The isolated nucleic acid of Claim 1, wherein said nucleic acid encodes the amino acid sequences of *M. kandleri* protein that are involved with DNA replication.

3. The amino acid sequences of claim 2, wherein said sequences are further identified by SEQ ID NOS. 1441, 0999, 0965, 0566, 1450, 0006, 1039, 1030, 1604, 1120, 0586 and 1394.

4. An isolated polypeptide having an amino acid sequence at least 95% identical to the amino acid sequence selected from the group consisting of SEQ ID NOS 1-1688 and 1690-1692.

5. An isolated polypeptide having an amino acid sequence at least 85% identical to the amino acid sequence selected from the group consisting of SEQ ID NOS 1-1688 and 1690-1692.

6. An isolated polypeptide, wherein said amino acid sequence is 100% identical to a sequence of claim 4.

7. An isolated antibody that binds specifically to the polypeptide of claim 6.

8. An isolated nucleic acid molecule comprising a polynucleotide having a nucleotide sequence at least 95% identical to a sequence selected from the group consisting of:

(a) a nucleotide sequence depicted in Attachment A wherein the starts and stops of each molecule are identified in Table 1.

9. The isolated nucleic acid molecule of Claim 1, wherein the degree of said nucleotide sequence identity is greater than at least 70%.

10. A recombinant host cell capable of expressing the polypeptides identified in Schedule B.

11. The recombinant host cell of Claim 10, wherein said polypeptides are further identified by SEQ ID NOS 1441, 0999, 0965, 0566, 1450, 0006, 1039, 1030, 1604, 1120, 0586 and 1394.

12. Computer readable medium having recorded thereon the nucleotide sequence depicted in SEQ ID NO 1692 wherein the degree of said nucleotide identity is greater than at least 70%.

13. The nucleotide sequence of claim 12, wherein said degree of identity is greater than 90%.

14. The nucleotide sequence of claim 12, wherein said degree of identity is greater than 95%.

15. The nucleotide sequence of claim 12, wherein said degree of identity is greater than 99%.

16. The computer readable medium of claim 12, wherein said medium is selected from the group consisting of a floppy disc, a hard disc, random access memory (RAM), read only memory (ROM), and CD-ROM.

17. A method for identifying an amino acid sequence, comprising the step of searching for putative open reading frames or protein coding sequences within one or more of *M. kandleri* nucleotide sequences selected form the group consisting of SEQ ID NO 1693.

18. A method according to Claim 17, comprising the steps of searching an *M. kandleri* nucleotide sequence for an initiation codon and searching the upstream sequence for an in-frame termination codon.

19. A method of producing a protein, comprising the step of expressing a protein comprising an amino acid sequence identified according to any one of claims 18-19.

20. A method for identifying a protein in *M. kandleri*, comprising the steps of producing a protein according to claim 19, producing an antibody which binds to the protein, and determining whether the antibody recognizes a protein produced by *M. kandleri*.

21. Nucleic acid comprising an open reading frame or protein-coding sequence identified by a method according to any one of claims 17-18.

22. A protein obtained by the method of claim 19.

23. A composition comprising (a) nucleic acid according to claims 1, 3, or 21; (b) protein according to any one of claims 4, 5, 6, or 22; and/or (c) an antibody according to claim 7.

24. The use of a composition according to claim 23 as a medicament or as a diagnostic reagent.

25. The use of a composition of claim 23, as a non-specific stabilizing additive for other proteins as well as for their enzymatic or structural activity.

26. A method of treating a patient, comprising administering to the patient a therapeutically effective amount of a composition according to claim 23.

27. A protein that is non-specifically stabilized by the presence of a protein identified by SEQ ID NOS 1-1688 and 1690-1692.

28. A method for improving the stability of a protein by introducing to said protein a polypeptide identified by at least one of said SEQ ID NOS 1-1688 and 1690-1692.

29. A method of increasing the enzymatic activity of a protein by introducing to said protein a polypeptide identified by at least one of said SEQ ID NOS 1-1688 and 1690-1692.

30. A method of increasing the structural activity of a protein by introducing to said protein a polypeptide identified by at least one of said SEQ ID NOS 1-1688 and 1690-1692.

31. A composition comprising a polypeptide identified by at least one of said SEQ ID NOS 1-1688 and 1690-1692 in combination with a protein not identified by one of said SEQ ID NOS 1-1688 and 1690-1692.